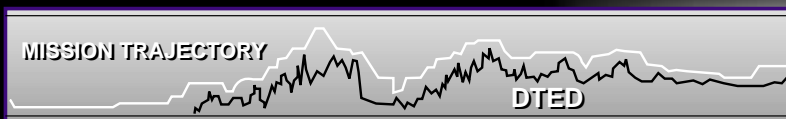
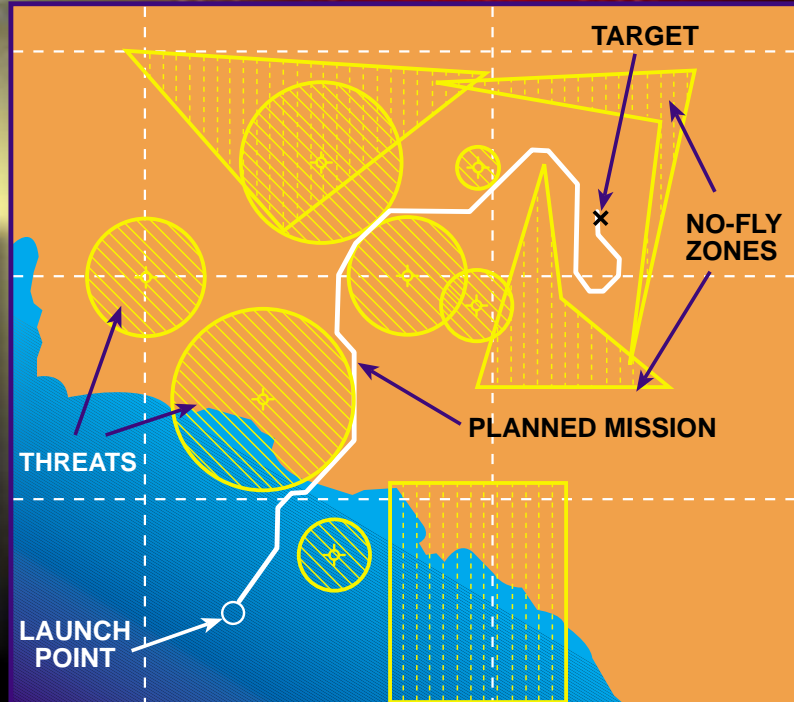


NAVSEA DAHLGREN

Quick Strike Planner



VERTICAL PROFILE ALONG THE ROUTE

SURFACE WARFARE CENTER DIVISION



DAHLGREN



PANAMA CITY DAM NECK

Tomorrow's Navy will need the ability to fire land attack missiles rapidly, efficiently, and extremely accurately. Today, when the Navy launches a Tomahawk Cruise Missile, the flight path, target location, and other necessary data to ensure an accurate hit, can be created only at two locations--Norfolk and Hawaii. This necessitates the use of highly trained, technical support to actually do the individual programming, and adds to the lack of ability to easily change the missile's course once launched. A similar capability is being deployed on our aircraft carriers.

To bring the planning capability up to and beyond the 21st Century, the Office of Naval Research has invested in automatic route planning technology for the Navy's land attack missile programs. They have requested NSWCDD to develop a prototype planning system which will enable accurate missile mission plans to be created on any platform -- surface combatant or submarine--within 1 minute. This prototype Quick Strike Planner provides a very fast means of planning Tomahawk missions using GPS navigation and replanning a route after the missile is in flight.

Current ONR Requirements

NSWCDD has been tasked with creating the Quick Strike Planner to fulfill the following requirements:

- Produce GPS mission data within 1 minute
- Develop a planner usable on any platform--surface combatant or submarine--with the ability to retarget in flight
- Build in the flexibility so the system can respond rapidly to changes in operational conditions
- Provide instant updates for "no-fly" zones and threat information

NSWCDD Results to Date

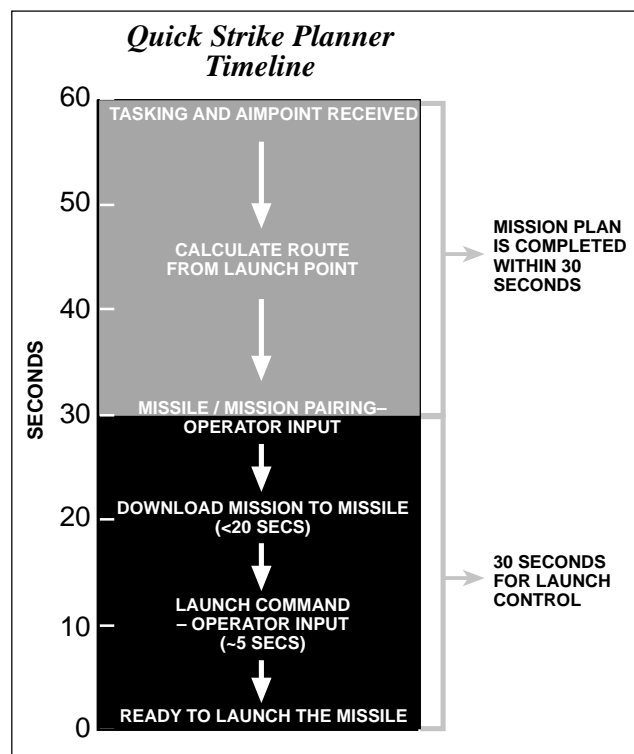
The Quick Strike Planner prototype has been developed for a Navy TAC-4 computer system and has been demonstrated to support a 1 minute timeline from receipt of target to launch.

The QSP software is designed to be computer independent--it will perform on any Unix operating system.

Principal Characteristics of the QSP Prototype

Currently, the Quick Strike Planner has been developed to have the following characteristics:

- Ability to quickly accommodate any changes in the threat picture
- Ability to accommodate no fly zones & guide the missile around such areas
- Ability to update rapidly for any new threats
- Ability to control the altitude of the missile for de-confliction or survivability
- Ability to simulate the trajectory
- Use of GPS navigation
- Tested on a TAC-4 computer
- Digital Terrain Elevation Data (DTED) terrain capability
- DII/COE compliant



NSWCDD/MP-99/38:2/99
Approved for public release; distribution is unlimited

For further information, please contact:

Dahlgren Division
Naval Surface Warfare Center
17320 Dahlgren Road
Dahlgren, VA 22448-5100

NSWCDD Public Affairs Office
(540)-653-8153
www.nswc.navy.mil/PAO